Amendments to the Claims

Please amend claims 1, 3, 7, 8, 10, 14, 15, 17 and 21. The currently pending claims after amendment are listed below.

1   1.   (Currently Amended)   A method for processing a multidimensional array object

2   comprising array objects, <u>said multidimensional array object and said array objects being digital</u>

3   <u>data objects storable in addressable data storage locations of a digital data processing device,</u> said

4   method comprising the steps of:

5   managing flags for said multidimensional array object, said flags representing whether it is

6   possible to optimize a process for elements of said multidimensional array object<u>, said process</u>

7   <u>being a defined set of instructions executable by said digital data processing device</u>; and

8   executing a machine code <u>performing said process, said machine code being selected from</u>

9   <u>among a plurality of machine codes performing said process according</u> ~~corresponding~~ to a state of

10 said flags.

1   2.   (Original)   The method of claim 1, further comprising:

2   inverting said flags when a predetermined condition is no longer met.

1   3.   (Currently Amended)   ~~The~~ <u>A</u> method ~~of claim 2~~ <u>for processing a multidimensional array</u>

2   <u>object comprising array objects</u>, <u>said method comprising the steps of:</u>

3   <u>managing flags for said multidimensional array object, said flags representing whether it is</u>

4   <u>possible to optimize a process for elements of said multidimensional array object;</u>

5   <u>inverting said flags when a predetermined condition is no longer met; and</u>

6   <u>executing a machine code corresponding to a state of said flags;</u>

7   wherein said predetermined condition is whether a base array of a multidimensional array

8   object is allocated to consecutive memory areas.

Docket No.:   JA998-218
Serial No.:   09/490,582

1   4.   (Original)   The method of claim 2, wherein said machine code is either a machine code

2   optimized or a machine code not optimized according to said predetermined condition.

1   5.   (Original)   The method of claim 2, further comprising:

2   determining whether said predetermined condition is met when writing to said

3   multidimensional array object.

1   6.   (Original)   The method of claim 2 wherein, further comprising:

2   if said predetermined condition is met when generating said multidimensional array object,

3   setting said flags to a generated multidimensional array object.

1   7.   (Currently Amended)   ~~The~~ A method ~~of claim 1 wherein, further~~ for processing a

2   multidimensional array object comprising array objects, said method comprising the steps of:

3   managing flags for said multidimensional array object, said flags representing whether it is

4   possible to optimize a process for elements of said multidimensional array object;

5   executing a machine code corresponding to a state of said flags; and

6   if there is possibility of multi-thread processing of said multidimensional array object,

7   generating a machine code for storing on a stack a dummy reference to said multidimensional

8   array during execution of an optimization code.

Docket No.:   JA998-218
Serial No.:   09/490,582

8.   (Currently Amended)   A storage medium storing a program for a multidimensional array object comprising array objects, <u>said multidimensional array object and said array objects being digital data objects storable in addressable data storage locations of a computer,</u> wherein said program, when read and executed by a̶ <u>said</u> computer, comprises steps of:

managing flags for said multidimensional array object, said flags representing that it is possible to optimize a process for elements of said multidimensional array object<u>, said process being a defined set of instructions executable by said computer</u>; and

executing a machine code <u>performing said process, said machine code being selected from among a plurality of machine codes performing said process according</u> c̶o̶r̶r̶e̶s̶p̶o̶n̶d̶i̶n̶g̶ to a state of said flags.

9.   (Original)   The storage medium of claim 8, further comprising:

inverting said flags when a predetermined condition is no longer met.

10.   (Currently Amended)   T̶h̶e̶ <u>A</u> storage medium o̶f̶ ̶c̶l̶a̶i̶m̶ ̶9̶ <u>storing a program for a multidimensional array object comprising array objects, wherein said program, when read and executed by a computer, comprises steps of:</u>

<u>managing flags for said multidimensional array object, said flags representing that it is possible to optimize a process for elements of said multidimensional array object;</u>

<u>inverting said flags when a predetermined condition is no longer met; and</u>

<u>executing a machine code corresponding to a state of said flags;</u>

wherein said predetermined condition is whether a base array of a multidimensional array object is allocated to consecutive memory areas.

11.   (Original)   The storage medium of claim 9, wherein said machine code is either a machine code optimized or a machine code not optimized according to said predetermined condition.

1   12.   (Original)   The storage medium of claim 9, further comprising:

2   determining whether said predetermined condition is met when writing to said

3   multidimensional array object.

1   13.   (Original)   The storage medium of claim 9, further comprising:

2   if said predetermined condition is met when generating said multidimensional array object,

3   setting said flags to a generated multidimensional array object.

1   14.   (Currently Amended)   ~~The~~ A storage medium ~~of claim 8~~ storing a program for a

2   multidimensional array object comprising array objects, wherein said program, when read and

3   executed by a computer, ~~further comprising~~ comprises steps of:

4   managing flags for said multidimensional array object, said flags representing that it is

5   possible to optimize a process for elements of said multidimensional array object;

6   executing a machine code corresponding to a state of said flags; and

7   if there is possibility of multi-thread processing of said multidimensional array object,

8   generating a machine code for storing on a stack a dummy reference to said multidimensional

9   array during execution of an optimization code.

1   15.   (Currently Amended)   A computer for processing a multidimensional array object

2   comprising array objects, <u>said multidimensional array object and said array objects being digital</u>

3   <u>data objects storable in addressable data storage locations of said computer,</u> said computer

4   comprising:

5   a central processing unit; and

6   a program, when read and executed by said central processing unit, comprises steps of:

7   managing flags for said multidimensional array object, said flags representing that it is

8   possible to optimize a process for elements of said multidimensional array object, <u>said process</u>

9   <u>being a defined set of instructions executable by said computer,</u> and

10   executing a machine code <u>performing said process, said machine code being selected from</u>

11   <u>among a plurality of machine codes performing said process according</u> ~~corresponding~~ to a state of

12   said flags.

1   16.   (Original)   The computer of claim 15, wherein said program further comprises:

2   inverting said flags when a predetermined condition is no longer met.

1   17.   (Currently Amended)   ~~The~~ <u>A</u> computer ~~of claim 16~~ <u>for processing a multidimensional</u>

2   <u>array object comprising array objects, said computer comprising:</u>

3   <u>a central processing unit; and</u>

4   <u>a program, when read and executed by said central processing unit, comprises steps of:</u>

5   <u>managing flags for said multidimensional array object, said flags representing that it is</u>

6   <u>possible to optimize a process for elements of said multidimensional array object,</u>

7   <u>inverting said flags when a predetermined condition is no longer met; and</u>

8   <u>executing a machine code corresponding to a state of said flags;</u>

9   wherein said predetermined condition is whether a base array of a multidimensional array

10   object is allocated to consecutive memory areas.

1   18.   (Original) The computer of claim 16, wherein said machine code is either a machine code

2   optimized or a machine code not optimized according to said predetermined condition.

1   19.   (Original) The computer of claim 16, wherein said program further comprises:

2   determining whether said predetermined condition is met when writing to said

3   multidimensional array object.

1   20.   (Original) The computer of claim 16, wherein said program further comprises:

2   if said predetermined condition is met when generating said multidimensional array object,

3   setting said flags to a generated multidimensional array object.

1   21.   (Currently Amended) ~~The~~ A computer ~~of claim 15~~ for processing a multidimensional

2   array object comprising array objects, said computer comprising:

3   a central processing unit; and

4   ~~wherein, said~~ a program, when read and executed by said central processing unit, ~~further~~

5   comprises steps of:

6   managing flags for said multidimensional array object, said flags representing that it is

7   possible to optimize a process for elements of said multidimensional array object,

8   executing a machine code corresponding to a state of said flags; and

9   if there is possibility of multi-thread processing of said multidimensional array object,

10   generating a machine code for storing on a stack a dummy reference to said multidimensional

11   array during execution of an optimization code.